Aerospace Electronics PLC Splitter Low Temperature Resistance

AI Overview

Aerospace-grade PLC splitters are designed to maintain stable optical performance and high reliability even under low temperature conditions, making them suitable for extreme environments.Overview of PLC SplittersPlanar Lightwave Circuit (PLC) splitters are passive optical devices that evenly distribute an optical signal from one or two input channels to multiple output channels (1xN or 2xN) using silica waveguide technology . They are widely used in aerospace and high-reliability applications due to their compact size, high channel uniformity, and low insertion loss . Aerospace-grade PLC splitters are often Telcordia GR-1221-CORE qualified and RoHS compliant, ensuring they meet stringent reliability standards .Low Temperature PerformancePLC splitters intended for aerospace or harsh environments are engineered to resist performance degradation at low temperatures. Key characteristics include:Stable Insertion Loss: High-quality PLC splitters maintain low insertion loss across a wide temperature range, preventing signal attenuation even in cryogenic conditions .Channel Uniformity: Uniformity between output channels remains consistent, ensuring reliable signal distribution under temperature fluctuations .Polarization Dependent Loss (PDL): PDL is minimized and remains stable at low temperatures, which is critical for maintaining signal integrity in aerospace optical systems .Material and Packaging: Silica waveguides and robust packaging protect the splitter from thermal stress, mechanical vibration, and shock. Proper packaging prevents characteristic deterioration due to temperature and humidity during transport and operation .Applications in Aerospace ElectronicsLow temperature resistant PLC splitters are suitable for:Satellite and spacecraft optical communication systems, where temperatures can drop significantly in space .High-...

Article Content

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The Low Temperature Electronics Program at the NASA Glenn Research Center focuses on research and development of electrical components, circuits, and systems suitable for

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The Extreme Temperature Electronics Program at the NASA Glenn Research Center focuses on research and development of electronics suitable for applications in the aerospace environment and

Planar Lightwave Circuit Splitter

Optone''s single-mode Planar Lightwave Circuit Splitter(PLCS) are developed based on unique silica glass waveguide process with reliable precision aligned fiber pigtail in a miniature package, it

Planar Lightwave Circuit (PLC) Splitter

Description The Gigalight Planar Lightwave Circuit (PLC) splitter is a type of optical power management device based on silica optical waveguide technology. It is widely used in passive optical networks to

RF Power Splitters

Our coaxial splitters are available with SMA, N-Type, F-Type, BNC, 2.92mm and 2.4mm connectors. Choose from over 580 models in stock with frequency ranges up to 65 GHz, power handling up to

AN10-006

A well-designed power splitter/combiner will offer high isolation, low insertion loss and good VSWR. You just don''t encounter a power splitter/combiner with high isolation and poor VSWR, nor high isolation

Planar Lightwave Circuit PLC Splitters

Planar Lightwave Circuit (PLC) Splitters delivers high-performance engineering, reliability and simplified deployment for critical network applications. Explore.

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3MTM Planar Light Circuit (PLC) Optical Splitters

3MTM Planar Light Circuit (PLC) Optical Splitters that exhibit uniform signal splitting for the most advanced optical networks. These planar silica waveguide devices are packaged in small form

1×32 Fiber Optic PLC Splitter ABS Module SC/APC

PLC Splitter is based on the planar waveguide technology. It provides a low-cost power distribution solution with small form factor and high reliability. The splitter can be assembled with any

PLC (Planar Lightwave Circuit) Splitters Information

PLC (planar lightwave circuit) splitters regulate the power of optical signals via splitting and routing, delivering reliable light distribution. They have a broader operating wavelength range (1260-1650 nm)

PLC Optical Splitters

Description Montclair offers a wide selection of high-quality PLC (Planar Lightwave Circuit) optical splitters for a variety of broadband network applications at a low per port cost. These passive

Planar Light Circuit (PLC) Optical Splitters

Bend-insensitive, reduced-water-peak, single-mode fiber is used to assure low bending loss in applications that require tight radius or significant handling by the technician.

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PLC Splitter (Standard Grade)

Corning''s Planar Lightwave Circuit Splitters deliver on all these requirements. These highly stable components perform superbly across temperature and wavelength providing low

Heat Resistance 1X8 Insert Type PLC Splitter Low Temperature Resistance ...

Product Description Heat Resistance 1x8 Insert Type PLC Splitter Low Temperature Resistance Plug-in Type Fiber Optic PLC Splitter Planar lightwave circuit (PLC) splitter is a type of optical power

Planar Light Circuit (PLC) Optical Splitters

These splitters are manufactured to help provide the high performance and reliability needed in the outside plant environment. These splitters are RoHS compliant.*

O Modules and Other Low-Power Applications (Rev

Isolated Power Topologies for PLC I/O Modules and Other Low-Power Applications Designers of programmable logic controller (PLC) I/O modules or other industrial low-power applications have to

Design and optimization of non-uniform 1 × 5 PLC splitter using ...

In this paper, the design and optimization of a non-uniform 1 × 5 PLC splitter are carried out, and the device performance sensitivity analysis towards various structure dimensions was then

Contact Us

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